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**Remarks/Arguments**

Applicants wish to thank the Examiner for the careful review of the claims, specification, and drawings.

In response to the Office Action mailed January 27, 2006, independent claims 1, 11, and 21 have been amended.

Dependent claims 2 and 12 have been cancelled.

Dependent claims 3-4, 7, 13-14, and 17 have been amended to address an antecedent issue.

Dependent claims 9, 10, 19, and 20 have been amended to provide more clarification.

After entry of this amendment, claims 1, 3-11, 13-21 are pending.

It is respectfully submitted that each and every feature recited in the amended claims are fully supported in the specification as filed. No new matter has been added.

**Rejections under 35 U.S.C §112**

The Office Action rejected claims 10 and 20 under 35 U.S.C §112 as being indefinite as follow: "Claims 10 and 20 each recite that a table has a configurable width span across a space designated for at least two channels. The metes and bounds intended by this limitation are not clear. It is not clear what "space" is designated for a channel, or to what "space" refers. Since two channels could also share connections at different times, it is also not clear whether the claim covers a table of a single channel width, since the space would still be designated for two channels."

Applicants have amended claims 10 and 20 to clarify that the plurality of table allocation includes at least one table having a configurable width span. Since the width of the table is configurable depending upon user's and market's need, metes and bounds of each table is adjustable.

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Further, Applicants have removed the term "space" and amended claims 10 and 20 to define the configurable width span to include at least two channels. The amendments of the claims with the clarification do not add new matter since the amendments merely clarify what is shown in the drawings as filed. Applicants respectfully submit that the amended pending claims 10 and 20 now clearly have overcome the rejections in the Office Action. Accordingly, Applicant respectfully requests that the rejections under 35 U.S.C. §112 be withdrawn.

#### Claim Objections

The Office Action objected to claims 1, 11, and 21 because of the following informalities: "These claims recite coupling tables to a memory. However, a table is generally not a physical thing but rather a logical construct."

Applicants have amended independent claims 1 and 11 to address the objections in the Office Action. Claims 1 and 11 have been amended to require, e.g., at least the feature of at least one internal memory with a plurality of lookup tables being coupled to at least one external memory via a single memory interface.

Dependent claims 2 and 12 have been canceled since the details of these two dependent claims have been essentially incorporated into independent claims 1 and 11, respectively.

Applicants have amended independent claim 21 to address the objections in the Office Action. Claim 21 has been amended to require, e.g., at least the feature of a first memory with a plurality of lookup tables being coupled to a second memory via a single memory interface.

Applicants respectfully submit that the amended pending claims 1, 11, and 21 now clearly have overcome the objections in the Office Action. Accordingly, Applicant respectfully requests that the objections in the Office Action be withdrawn.

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Rejections under 35 U.S.C. §102 and 35 U.S.C. §103

The Office Action rejected claims 1-3, 5-6, 8, 11-13, 15-16, 18, and 21 under 35 U.S.C. §102 (a) as being anticipated by the admitted prior art.

Also, the Office Action rejected claims 1, 18, 11, 18, and 21 under 35 U.S.C. §102 (e) as being anticipated by *Melchior* (US 6,473,846 B1), hereinafter “*Melchior*.”

Further, the Office Action rejected claims 4 and 7 under 35 U.S.C. §103 (a) as being anticipated by the admitted prior art.

In addition, the Office Action rejected claims 9-10 and 19-20 under 35 U.S.C. §103(a) as being unpatentable over the prior art, in view of *Nataraj et al.* (US 6,757,779), hereinafter “*Nataraj*.”

Applicants have amended independent claims 1, 11, and 21 to require, in the manner claimed, that the configurable lookup table extension system includes a first memory with a plurality of lookup tables and a second memory. Also, a flexible controller is configured to couple the first memory to the second memory via a single memory interface. Further, the flexible controller dynamically allocates the second memory between the plurality of lookup tables in use thus allowing the second memory to be efficiently distributed according to memory space usage of each lookup tables.

The admitted prior art relied on by the Examiner does not disclose or suggest in the manner claimed in independent 1, 11, and 21 as mentioned above. The admitted prior art (FIG. 1) may provide for a first and second memory. However, the admitted prior art does not provide for a single memory interface shared between the various lookup tables. Instead, each table of the first memory in the admitted prior art has its own interface with the second memory.

In regard to *Melchior*, the cited art relied on by the Examiner does not disclose or suggest in the manner claimed in independent claim 1 as mentioned above. *Melchior* does not provide for a flexible controller which may dynamically allocate the second

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memory among the plurality of lookup tables of the first memory thus allowing the second memory to be efficiently distributed according to memory space usage of each lookup tables.

For at least the aforementioned reasons and others, Applicants respectfully submit that the pending claims 1, 11, and 21 are novel, non-obvious, and allowable over the cited art of record, taken alone or in combination, and request that the above rejections be removed. Also, the dependent claims are allowable due to their dependency on patentable parent claims and also due to their recitations of independently patentable features. Further, Applicants respectfully submit that *Nataraj* does not remedy the deficiency in *Melchior* and/or the admitted prior art and pending independent claims 1, 11, 21 and the dependent claims should be allowed over the cited arts. Accordingly, Applicant respectfully requests that rejections under 35 U.S.C. §102 and 35 U.S.C. §103 be withdrawn.

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**Conclusion**

In view of the discussion herein, Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at 408-257-5500.

If any petition is required to facilitate the entry of the present amendment, please consider this communication a petition therefore as well. The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-2284 (Order No. RZMI-P308).

Respectfully submitted,

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